

Claims

1. A light control device comprising a liquid crystal element in which liquid crystal is sealed between opposed
5 substrates,

wherein said liquid crystal is a polymer network liquid crystal, and a gap between said opposed substrates in an effective optical path is 4-11 μm .

10 2. The light control device according to claim 1, wherein said gap is 6-10 μm .

3. The light control device according to claim 1, wherein optically transparent electrodes are provided
15 on said opposed surfaces of optically transparent said opposed substrates, respectively.

4. The light control device according to claim 1, further comprising:

20 a temperature detecting section which detects the environmental temperature of said liquid crystal element; and

a pulse control section which controls the applied voltage for driving said liquid crystal element, according to said environmental temperature detected by said temperature
25 detecting section.

5. The light control device according to claim 4, wherein said applied voltage is an effective AC pulse
30 voltage.

6. A driving method of a light control device having a liquid

crystal element in which liquid crystal is sealed between opposed substrates, said liquid crystal being a polymer network liquid crystal, a gap between the opposed substrates in an effective optical path being 4-11 μm ;

5 wherein said driving method comprising:

 controlling an applied voltage for driving said liquid crystal element, according to the environmental temperature of said liquid crystal element.

10 7. The driving method of a light control device according to claim 6,

 wherein a temperature detecting section which detects the environmental temperature of said liquid crystal element is provided and said applied voltage is controlled according
15 to the environmental temperature detected by said temperature detecting section.

8. The driving method of a light control device according to claim 6,

20 wherein an effective AC pulse voltage is used as said applied voltage.

9. An image pickup apparatus,

 wherein any of said light control device according to
25 claims 1 to 5 is disposed in an optical path of an image pickup system of said image pick up apparatus.